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Stephen Hindley

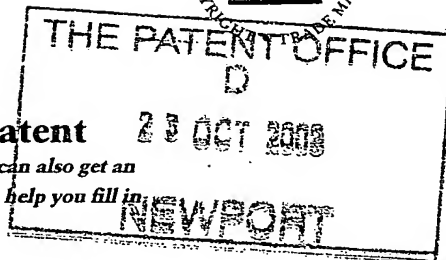
Dated

11 November 2003

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23OCT03 E846590-1 D02896
P01/7700 0.00-0324671.7



Request for grant of a patent

(See the notes on the back of this form. You can also get an explanatory leaflet from the Patent Office to help you fill in this form)

The Patent Office

Cardiff Road
Newport
South Wales
NP10 8QQ

1. Your reference

MRHPO4897GB

2. Patent application number

(The Patent Office will fill in this part)

0324671.7

23 OCT 2003

3. Full name, address and postcode of the or of each applicant (underline all surnames)

Ronald Alexander Young
95 Mushroom Green
Dudley Wood
West Midlands
DY2 0EE

Patents ADP number (if you know it)

If the applicant is a corporate body, give the country/state of its incorporation

372253002

4. Title of the invention

CLEANING EQUIPMENT

5. Name of your agent (if you have one)

"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)

Marks & Clerk
27 Imperial Square
Cheltenham
GL50 1RQ

Patents ADP number (if you know it)

18014 ✓

6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and (if you know it) the or each application number

Country

Priority application number
(if you know it)

Date of filing
(day / month / year)

7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

Number of earlier application

Date of filing
(day / month / year)

8. Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer 'Yes' if:

No

- a) any applicant named in part 3 is not an inventor, or
 - b) there is an inventor who is not named as an applicant, or
 - c) any named applicant is a corporate body.
- See note (d))

Patents Form 1/77

9. Enter the number of sheets for any of the following items you are filing with this form. Do not count copies of the same document:

Continuation sheets of this form

Description 5

Claim(s) 3

Abstract 1

Drawing(s) 1

10. If you are also filing any of the following, state how many against each item.

Priority documents

Translations of priority documents

Statement of inventorship and right to grant of a patent (Patents Form 7/77)

Request for preliminary examination and search (Patents Form 9/77)

1 /

Request for substantive examination (Patents Form 10/77)

Any other documents (please specify)

11. I/We request the grant of a patent on the basis of this application.

Signature



Date

Marks & Clerk 22nd October 2003

12. Name and daytime telephone number of person to contact in the United Kingdom

Mr M R Higgins
01242 524520

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DUPLICATE

CLEANING EQUIPMENT

This invention relates to cleaning equipment in which cleaning liquid is taken from container, for example a bucket, and returned thereto after it has been used for
5 dirt removal. It is of particular, but by no means exclusive, application to a cleaning bucket for use with a cleaning element or device, such as floor mop, cleaning cloth or chamois leather which is repeatedly wrung out into the bucket.

A problem with such cleaning equipment is that dirt deposited out from the
10 liquid collects at the bottom of the container and that disturbance of the liquid, as when rinsing out a mop for example, washes the collected dirt back into the main body of the liquid. In addition a cleaning element such as a mop can pick up the collected dirt directly. Because of this the container is often emptied and cleaned out before the cleaning additives in the liquid are actually exhausted.

15

According to the present invention there is provided cleaning equipment comprising a container for cleaning liquid, a wringer mounted on or in the container, a partition element dividing the container into a first compartment which, in use, receives liquid wrung out in the wringer and a second compartment which, in use,
20 receives cleaning liquid and a dirt receiving element for receiving dirt settling from the cleaning liquid in use contained in the second compartment.

Preferably, the partition element has a part defining the base of the second compartment. This part is preferably apertured and the dirt receiving element is preferably located below the said apertured part of the partition element.

5 Advantageously, the first and second compartments communicate with one another *via* the dirt receiving element.

Conveniently, the partition element is removable from the container to facilitate cleaning of the container and dirt receiving element.

10

The dirt receiving element may comprise a mat or pad of superposed mesh layers or may be a non-woven unitary mesh comprising a "jumble" of interlocking or bonded fibres.

15 The invention will now be more particularly described, by way of example, with reference to the accompanying diagrammatic drawing which illustrates, in vertical cross-section, one example of cleaning equipment according to the invention.

Referring to the drawing, the cleaning equipment shown therein is typically for
20 domestic use and comprises a container in the form of a bucket 1, a basket-like wringer 2 including a support flange 8 removably mounted on the upper lip of the bucket 1 so as to cover only a part of the upper end of the bucket 1, and a partition element 3 which divides the bucket 1 into a first compartment 4 which receives liquid

wrung out in the wringer 2 and a second compartment 5 which receives cleaning liquid, e.g. clean water and a flocculant chemical.

The partition element 3 curves gently away from the wringer 2 in a downwards direction and has a flat lower part 3a which defines the base of the second compartment 5.

The part 3a of the partition element 3 is provided with a plurality of apertures and a dirt receiving element 6 is located below the part 3a of the partition element 3.

10 The dirt receiving element 6 may be secured to the underside of the part 3a of the partition element, typically by adhesive.

The element 6 is a three dimensional fibrous mesh structure (or reticulated foam structure) and may comprise a mat or pad of superposed mesh layers or may be

15 a non-woven unitary mesh comprising a "jumble" of interlocking or bonded fibres.

The first and second compartments 4 and 5, respectively, communicate with one another *via* the element 6 and the apertures in the part 3a of the partition element 3. Thus, the water level in each of the two compartments 4 and 5 will maintain the

20 same level and the water level in the first compartment 4 will not exceed that in the compartment 5 as cleaning liquid is wrung out in the wringer 2.

The flocculant chemical draws small particles out of the suspension and these particles, together with heavier dirt particles settle into the filter.

The form of the element 6 is such that disturbances in the liquid cannot wash back out into the body of the liquid, to any material extent, dirt particles which are deposited from the liquid and which settle into the inter-fibre spaces of the element 6.

- 5 In fact the act of rinsing the cleaning element in the compartment 5 creates a bellows effect producing turbulence to drive the dirt particles into the compartment 4. There is little turbulence in compartment 4 so there is little or no flow back from compartment 4 to compartment 5.

- 10 The partition element 3 is removable from within the bucket 1 to facilitate cleaning of the bucket and fits behind a depending flange 7 on the wringer support flange 8. Movement of the partition element 3 towards the first compartment 4 is restrained.

- 15 In use, a mop or other cleaning implement is rinsed out in the cleaning liquid in the second compartment 5 and is then wrung out in the wringer 2. The mop or other cleaning implement is then used to clean, for example, a work surface and then rinsed again in the cleaning liquid in the second compartment.

- 20 Dirt removed from the cleaning implement during a rinsing operation is trapped in the dirt receiving element 6. This avoids the need to change the cleaning liquid too frequently.

Ideally, the dirt receiving element is a re-usable unit which can be replaced in the container after removal therefrom and washing out of the collected dirt.

Also, the bucket may be of transparent plastics material for observation of the
5 water condition.

The above embodiment is given by way of example only and various modifications will be apparent to persons skilled in the art without departing from the scope of the invention as defined by the appended claims. For example, the wringer
10 could be mounted on a ledge in the bucket rather than be mounted on the upper lip of the bucket.

15

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CLAIMS

1. Cleaning equipment comprising a container for cleaning liquid, a wringer mounted on or in the container, a partition element dividing the container into a first
5 compartment which, in use, receives liquid wrung out in the wringer and a second compartment which, in use, receives cleaning liquid and a dirt receiving element for receiving dirt settling from the cleaning liquid in use contained in the second compartment.

10 2. Cleaning equipment as claimed in claim 1, wherein the partition element has a part defining the base of the second compartment.

3. Cleaning equipment as claimed in claim 2, wherein said part of the partition element is apertured.

15

4. Cleaning equipment as claimed in claim 3, wherein the dirt receiving element is located below the said apertured part of the partition element.

5. Cleaning equipment as claimed in claim 4, wherein the dirt receiving element
20 is secured to the underside of said apertured part of the partition element.

6. Cleaning equipment as claimed in any one of the preceding claims, wherein the first and second compartments communicate with one another via the dirt receiving element.

7. Cleaning equipment as claimed in any one of the preceding claims, wherein the partition element is removable from the container to facilitate cleaning of the container.
8. Cleaning equipment as claimed in any one of the preceding claims, wherein the
5 form and structure of the dirt receiving element is a three-dimensional fibrous mesh structure.
9. Cleaning equipment as claimed in claim 8, wherein the dirt receiving element comprises a mat or pad or superposed mesh layers.
- 10
10. Cleaning equipment as claimed in claim 8, wherein the dirt receiving element is a non-woven unitary mesh comprising a "jumble" of interlocking or bonded fibres.
11. Cleaning equipment as claimed in any one of the preceding claims, wherein the
15 dirt receiving element is a reusable unit which can be replaced in the container after removal therefrom and washing out of the collected dirt.
12. Cleaning equipment as claimed in any one of the preceding claims, wherein the wringer is a basket-type wringer.
- 20
13. Cleaning equipment as claimed in any one of the preceding claims, wherein the container is a cleaning bucket for use with a hand-held cleaning element or device.
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14. Cleaning equipment as claimed in any one of the preceding claims, wherein the container is transparent.

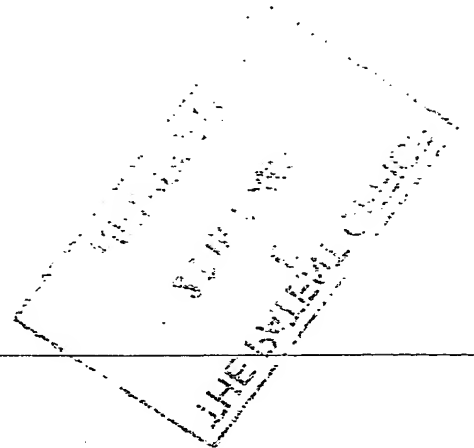
15. Cleaning equipment substantially as hereinbefore described with reference to
5 the accompanying drawing.

ABSTRACTCLEANING EQUIPMENT

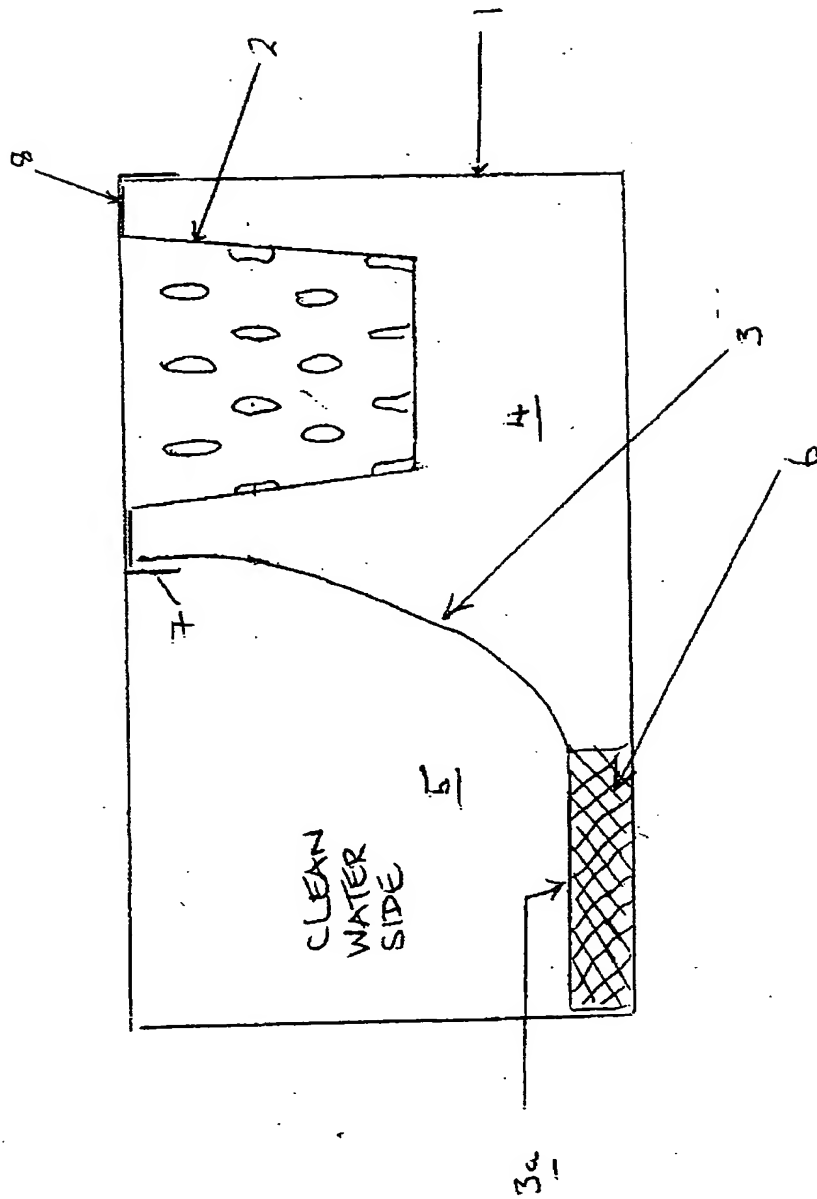
The cleaning equipment comprises a container, typically a bucket 1, a wringer
5 2 mounted on or in the container and a partition element 3 dividing the container into
a first compartment 4 which, in use, receives liquid wrung out in the wringer and a
second compartment 5 which, in use, receives cleaning liquid. A dirt receiving
element 6 is provided for receiving dirt settling from the cleaning liquid in use
contained in the second compartment. The dirt receiving element may be located
10 below an apertured part of the partition element which defines the base of the second
compartment. Preferably, the first and second compartments communicate with one
another *via* the dirt receiving element.

(Refer to single Figure)

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